

# Claims

- [c1] 1.A method for automatically switching a profile of a mobile phone, the method comprising:
- (a)measuring a current environmental noise value of ambient noise surrounding the mobile phone;
  - (b)comparing the current environmental noise value to a predetermined noise value and calculating a noise difference; and
  - (c)switching the profile of the mobile phone based on the value of the noise difference.
- [c2] 2.The method of claim 1 further comprising:
- (d)measuring a current antenna signal strength value from antenna signals received by the mobile phone; and
  - (e)comparing the current antenna signal strength value to a predetermined antenna signal strength value and calculating a signal strength difference;
- wherein step (c) further comprises switching the profile of the mobile phone based on the values of the noise difference and the signal strength difference.
- [c3] 3.The method of claim 2 wherein steps (a) to (e) are performed when the mobile phone is in idle mode.

[c4] 4.The method of claim 2 further comprising:  
(f)using a timer to count for a predetermined period of time; and  
(g)repeating steps (a) to (e) and restarting the timer when the timer has finished counting for the predetermined period of time.

[c5] 5.The method of claim 2 further comprising:  
switching the profile of the mobile phone to a first profile if the current antenna signal strength value is greater than the predetermined antenna signal strength value and the current environmental noise value is less than the predetermined noise value;  
switching the profile of the mobile phone to a second profile if the current antenna signal strength value is greater than the predetermined antenna signal strength value and the current environmental noise value is greater than the predetermined noise value;  
switching the profile of the mobile phone to a third profile if the current antenna signal strength value is less than the predetermined antenna signal strength value and the current environmental noise value is greater than the predetermined noise value;  
switching the profile of the mobile phone to a fourth profile if the current antenna signal strength value is less than the predetermined antenna signal strength value

and the current environmental noise value is less than the predetermined noise value; and  
switching the profile of the mobile phone to a fifth profile if the current antenna signal strength value is equal to the predetermined antenna signal strength value or the current environmental noise value is equal to the predetermined noise value.

- [c6] 6.The method of claim 5 wherein settings of each of the first through fifth profiles are customizable by the user of the mobile phone.
- [c7] 7.The method of claim 5 wherein the first profile is a normal profile, the second profile is an outdoor profile, the third profile is a meeting profile, the fourth profile is a silent profile, and the fifth profile is a profile previously selected by the user of the mobile phone.
- [c8] 8.The method of claim 1 wherein the current environmental noise value of ambient noise surrounding the mobile phone is detected with a microphone of the mobile phone.
- [c9] 9.The method of claim 1 wherein the profile of the mobile phone is automatically switched only when a user of the mobile phone activates an automatic profile switching function.

[c10] 10.A method for automatically switching a profile of a mobile phone, the method comprising:  
(a)measuring a current antenna signal strength value from antenna signals received by the mobile phone;  
(b)comparing the current antenna signal strength value to a predetermined antenna signal strength value and calculating a signal strength difference; and  
(c)switching the profile of the mobile phone based on the value of the signal strength difference.

[c11] 11.The method of claim 10 further comprising:  
(d)measuring a current environmental noise value of ambient noise surrounding the mobile phone; and  
(e)comparing the current environmental noise value to a predetermined noise value and calculating a noise difference;  
wherein step (c) further comprises switching the profile of the mobile phone based on the values of the noise difference and the signal strength difference.

[c12] 12.The method of claim 11 wherein steps (a) to (e) are performed when the mobile phone is in idle mode.

[c13] 13.The method of claim 11 further comprising:  
(f)using a timer to count for a predetermined period of time; and

(g)repeating steps (a) to (e) and restarting the timer when the timer has finished counting for the predetermined period of time.

[c14] 14.The method of claim 11 further comprising:  
switching the profile of the mobile phone to a first profile if the current antenna signal strength value is greater than the predetermined antenna signal strength value and the current environmental noise value is less than the predetermined noise value;  
switching the profile of the mobile phone to a second profile if the current antenna signal strength value is greater than the predetermined antenna signal strength value and the current environmental noise value is greater than the predetermined noise value;  
switching the profile of the mobile phone to a third profile if the current antenna signal strength value is less than the predetermined antenna signal strength value and the current environmental noise value is greater than the predetermined noise value;  
switching the profile of the mobile phone to a fourth profile if the current antenna signal strength value is less than the predetermined antenna signal strength value and the current environmental noise value is less than the predetermined noise value; and  
switching the profile of the mobile phone to a fifth pro-

file if the current antenna signal strength value is equal to the predetermined antenna signal strength value or the current environmental noise value is equal to the predetermined noise value.

[c15] 15.The method of claim 14 wherein settings of each of the first through fifth profiles are customizable by the user of the mobile phone.

[c16] 16.The method of claim 14 wherein the first profile is a normal profile, the second profile is an outdoor profile, the third profile is a meeting profile, the fourth profile is a silent profile, and the fifth profile is a profile previously selected by the user of the mobile phone.

[c17] 17.The method of claim 11 wherein the current environmental noise value of ambient noise surrounding the mobile phone is detected with a microphone of the mobile phone.

[c18] 18.The method of claim 10 wherein the profile of the mobile phone is automatically switched only when a user of the mobile phone activates an automatic profile switching function.